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# FIELD NOTES FROM NORTH LINCOLNSHIRE IN THE SPRING OF 1888.

By JOHN CORDEAUX.

MARCH 12th.—A young dark-faced Puffin, with a small beak, was shown me to-day; it was taken in the surf at Cleethorpes, and the man had it in a basket alive.

March 28th.—Flocks of Lapwing and Golden Plover in the marshes; a few Pied Wagtails about, and many pairs of Meadow Pipits; about a thousand Dunlin on the foreshore. A large hawk, apparently a Peregrine, was feeding on a Stock Dove in a field near the Humber; one half the breast was eaten. On going to the spot the story of the tragedy was made clear: the Dove had been struck in full flight a considerable distance from where it fell, slayer and slain hurled forward together in the hurricanerush of the fatal stoop, till both had come to the ground. Two long, narrow, and converging lines of small feathers, ripped from the shoulders and neck, led up to the body; the head also was torn from the neck, and some distance apart, severed by the same impact of that terrible hind claw.

April 12th.—Strolling down the "beck" this afternoon I flushed a Green Sandpiper. Saw a Snipe and Water Rail. In a willow-carr were numerous Reed Buntings; one fine old male struck me as unusually light-coloured and a distinct variety.

April 14th.—First Swallow seen, and several between this and the 18th.

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April 16th.—S.W., rain. Saw a small flock of Wheatears, three males and three females.

April 19th.—S., heavy showers. Chiffchaff heard, and Willow Wren seen; a great many Wheatears on passage.

April 24th.—N., cold rain. First Redstart; a female and two male Wheatears, all three on a whitethorn hedge. Observed a beautiful variety of the Blackbird, the body rich bronze; wings, except the primaries, which were of the normal colour, a pale silver-grey.

April 26th.—N., very cold. Drove to Croxby Pond, attracted by a report that a strange bird-" a large fish-eating Diver"-had frequented the place since the last week in March. Cautiously approaching from the north side, through the wood, I got out my telescope at the last tree, and proceeded to sweep the water. the near foreground, amongst dead and broken reeds, was a cock and hen Teal, then a glossy green-headed Mallard and his mate, and beyond these a female Shoveller. Near to the centre of the water was the object of the quest-a Great Northern Diver, in the autumn plumage, the upper parts greyish black, with indistinct ashcoloured markings; throat, front of neck, and other under parts visible, white, with a few dark streaks on the posterior half of the This fine bird was swimming majestically to and fro, sometimes carrying its head for some seconds beneath the water. As long as I was concealed it swam rather high, but on advancing into the open, imperceptibly sank itself, like a torpedo-boat, till little but the dark upper parts were visible. The keeper said he had seen it catch fish, and mournfully expressed regret that the bird's extreme cunning and wariness had thus far baffled him in becoming its executioner. The sea is clearly visible from the hills above Croxby, and no doubt it had been driven in during one of those miniature blizzards from the north-east with much driving snow late in March; lashed with salt spray and blind with the stinging hail, it rose and flew landward, rising higher and still higher as swept forward before the resistless blast, outpacing its own tremendous swiftness; and then, as the storm slackens, it stoops again to the wood-girdled mirror in the lonely hills,the only dark space visible in the vast solitude of the snow-clad wold,-and there, despite the keeper and his gun, to find for many a day to come, a haven of security and quiet rest. I am pleased to add that, of its own free will, this our interesting visitor has now disappeared altogether from the pond. I saw a considerable number of Teal on the water, or flying restlessly to and fro, their often repeated spring call-note resembling the creak of a wheelbarrow; this and the monotonous bell-note of the Coots were the sounds which broke the stillness of this quiet spot. The Coots were many, in pairs, sometimes chasing each other with much noisy splashing. The males had the bills and also the frontal plates a delicate pink—the colour of a "Captain Christy" rose; and the Waterhens, dabbling along the reedy margin, had the same parts like red sealing-wax. Two pairs of Carrion Crows slyly watched the pond from the neighbouring wood-a portent of much future ill to the domestic arrangements of the waterfowl. This was quite a red-letter day for an ornithologist, for on my return I saw a Ring Ouzel, and at a sharp angle of our "beck" came upon fifteen little animated lumps of sulphur—the first Yellow Wagtails of the season. They were all males, and together within the space of a few yards, on short green turf, searching as if for something to eat. I examined them very carefully with a binocular, and found one which had entirely a yellow head, the occiput only very slightly marked with olive-green. Later in the afternoon I saw four females and a male, also several Pied Wagtails—these latter in pairs. Perched on a low bush in a meadow was the first Whinchat of the season, and on a row of high trees, the nearest to the coast, a large flight of Fieldfares, chattering and noisy, as if in consultation on their forthcoming passage to Norwegian pine-woods.

April 28th.—Several Redstarts in the hedgerows in the marsh; all are females, which is here invariably the case in the spring migration; the males appear to choose some other route.

April 30th.—S., very warm. This morning the hedgerows swarmed with Willow Wrens, all restless and on the move inland. I do not remember ever having seen so many at one time before, not even in the autumn at the Spurn, when they are moving south. Numerous other small birds have come in during the night—Lesser Whitethroat, Whinchats, Tree Pipits, and large numbers of Swallows. Cuckoo first heard. In a field, where men were ridging for potatoes, were many Yellow Wagtails, and with thema single White Wagtail, Motacilla alba—a beautiful well-marked male; two, I have been informed, were obtained near Yarmouth at the same date. I was much struck with the large influx of small migrants seen this morning, and conjecture they had come just in advance of the southerly gale, which, commencing on the

night of the 30th, continued to blow with more or less violence for the three following days. Subsequently a friend living in Grimsby told me he had heard, at midnight on the 29th, the cries of large numbers of birds passing over the town.

May 2nd.—S., gale. Sedge Warbler and Sand Martins first seen, the latter numerous.

May 3rd.—S., strong gale. First appearance of Whimbrel in the marshes.

May 4th.—S., strong. About two thousand Dunlin on the muds, chiefly in summer plumage, with the black abdominal patch very distinct. I was watching these from the bank when a Sheldrake flew into the field of the glass; following the flight of the bird for about a quarter of a mile along the shore, I observed it suddenly slacken, make a half-circle, and drop to about a score of small, plump, dark-looking ducks, which were swimming rather high in the water. I was puzzled at the time to determine the species, as they showed little distinctive colouring, also the water was rough. The males amongst them were clearly distinguishable by having dark heads and necks, and now one and then another of these, from time to time, rolled up a white flank on the top of a wave. They were most expert divers. Again, on the 5th, at the same place, when the water was comparatively smooth, I had them under the glass, and this time had no difficulty in recognizing Tufted Ducks, but I think there was not a mature plumaged bird amongst them. They were in much the same dress as we find the young of the year in the autumn, with individual variations in the stage of change to maturity.

May 5th.—Innumerable Dunlin, some Whimbrel and Curlew, and a few Grey Plover, one in summer plumage. Turtle Dove first heard.

May 8th.—Dunlin still numerous, and many more Grey Plover and Whimbrel. Common Sandpiper on the foreshore.

May 9th.—Walked for some hours across one of the wild commons which remain in North Lincolnshire. I am sorry to say that, since my last visit, cultivation has made sad inroads into what was, not many years ago, one of the most interesting spots in the county, both as regards the fauna and flora. A considerable portion has been torn up by steam, exposing a white blowing-sand, totally unfitted in these times for profitable cultivation; "flashes," or ponds, formerly the haunt of innumerable

wildfowl, have been drained. Still enough remains to make us regret all that has vanished. I saw several Shovellers, chiefly males, on the wing, sufficient to represent eight or nine pairs. Snipe, Redshank, and Lapwings, also numerous Wild Duck and Teal, the two latter with young broods on the "flashes." I also flushed a pair of Dunlin from the heather, belonging to that small, brightly-coloured race, some few of which haunt the banks of the salt-water drains throughout the year. I had not the least doubt, from the anxious manner of the little birds that they had a nest not far off. I have received the eggs from this place, and much rarer finds than even this, amongst the waders, have been made in recent years. Formerly this common was a great resort of the Short-eared Owl, several pair remaining to nest. Owls have been exterminated by the keepers with their deadly pole-traps—a cruel form of bird-murder which no humane person would tolerate or adopt. I question whether there are now more than a pair or two nesting anywhere in the district. The useful Barn Owl, too, has been ruthlessly destroyed whenever opportunity offered, in this same cruel fashion. Noiselessly across the waste in the twilight, like a flitting phantom, comes the softwinged Owl, and seeing, as if placed ready to his use, a post of vantage from which he may mark each stealthy movement of the mischievous Field Vole, stays his flight to settle on the treacherous perch; and then during all that long, sad night,and too often, we fear, through the succeeding day, - with splintered bone protruding through smashed flesh and torn tendon, hangs suspended in supreme agony, gibbetted head downwards, till death puts an end to his sufferings. Well may we ask, Can all the game-preserving in the world justify this ignorant and needless wrong? A pair of Sheldrakes nested on the common in 1887, and at this time eleven adults may be seen on a large pond within a few miles, where they are carefully protected. I found both Stock Doves and Wheatears, in some numbers, using the old deserted, rabbit-burrows. invariably deserted by the rabbits? From the foot-marks at the entrance I suspect both bird and quadruped sometimes use the same hole, or at least enter by the same door. A large colony of Black-headed Gulls have now entirely removed from their old pond, and gone to another further within the common; eggs were numerous, but I did not see any young: they now share the pond with Shovellers, Mallard, and Teal. I have never heard the Shoveller utter any note or sound when flushed; but my friend Mr. J. Ostler Nicholson, who, from living close to their haunts, has had great experience of their habits, says that the note during the breeding-season is "tuck, tuck," and frequently uttered when they are in flight; he once heard it, out of the breeding-season, when a pair were flushed from a pond in the middle of the day. I also saw three male Pochards on an extensive ballast-pit, in part grown up with alder-bushes, flags, and reeds. Several times during the spring, when passing this place, I have noticed these ducks in pairs, and now, from seeing the drakes alone, it is presumable their mates are sitting on eggs.

May 10th.—S., rain. I saw to-day two couple of Dotterel in an extensive marsh-pasture near the Humber. For thirty years I have generally seen some in this field in May. I drove very close to the birds in a pony carriage; they were wonderfully fearless and tame, running quietly forward, and it was only on trying to decrease the short distance between us that they rose to wing with a low mournful whistle, flew a few yards, and again alighted, sometimes quite motionless, or hoisting one wing like a small sail, or running a few steps would quickly stoop and pick some small object from the grass-roots. Listening to the soft melancholy call-note of the bonny birds recalled scenes very different from their present surroundings, and I had only to close my eyes to picture an alpine waste of grey stones set in tufted moss and dwarf creeping-plants, where long steep slopes of velvet turf and loose shingle sweep down to leagues of heather and white cotton-grass, till the broken muirland becomes blended with the shining waters of a loch, backed by an horizon of snowpatched mountain. Dotterel are certainly not so common as they were thirty or forty years ago, when, I am told, "trips" numbering fifty to one hundred were not exceptional; and I have a note of twenty couple, killed by two guns in one day on the high wolds. This was on their first coming before they pass forward into the marshes, and some years before the passing of the Wild Birds Protection Act.

May 17th.—Spotted Flycatcher first seen. Found a nest of the Lesser Whitethroat with the bird sitting on the eggs, the nest being placed near the summit of a laurel fronting our lawn.

May 18th.—S.E. First Garden Warblers; several heard during

the day. Dunlin and Ringed Plover were scattered all over the foreshore; the latter had much increased during the week. About the usual number of Curlew, Whimbrel, and Grey Plover, also a few Turnstone. This was the day on which Pallas's Sand Grouse, Syrrhaptes paradoxus, arrived at Flamborough and the Spurn; one, a fine male, was obtained at Irby, six miles S.W. of Grimsby,\* at the same date; and another, also a male, shot from four on Swallow wold, near Caistor, on the 22nd. About seventy were seen in the Spurn district between the 18th and 26th.

May 19th.—S., warm. Saw a second "trip" of Dotterel, numbering ten birds, in the same field as before—a bare sheep-pasture; they were somewhat scattered, but on my driving slowly round, and gradually contracting the distance, they drew together, the outside bird of the group being within easy cast of an ordinary trout-rod from where I sat. Now one and then another would elevate a wing till the point was perpendicular to the body, suggestive of a man stretching his arm above his head; they also gave utterance to some low subdued notes, quite a pretty musical trill, and only audible at a short distance, and altogether distinct from their ordinary flight-call. On the foreshore of the Humber were nearly the same species as yesterday, excluding Whimbrel, and with the addition of some Redshanks. There were three Nightingales singing this evening within a short walk of the house.

May 21st.—E., moderate. Saw the Dotterel once more in their old quarters (but not after this date); and not a wader of any description, even a solitary Dunlin, was to be seen on the two miles of foreshore, where they had been so exceedingly plentiful on the 19th.

May 22nd.—There is a Kestrel sitting in the old nest of a Carrion Crow, placed in a solitary thorn which overhangs a drain in the marsh. The nest is not more than eight feet above the level of the land. A pair nested last year exactly in a similar situation in the same locality.

May 24th.—N., very cold. Dunlin and Ringed Plover in some numbers on the foreshore, and about a dozen Grey Plover in summer plumage.

<sup>\*</sup> This, I subsequently found, was one of the three shot from a small flock of five by a boy employed in tenting birds on the wold. I obtained it by the merest accident, the other two having been plucked and eaten.

# ON THE WINTER BREEDING OF THE OTTER. By Thomas Southwell, F.Z.S.

In 'The Zoologist' for 1877, p. 172, in reply to some interesting observations, by Mr. A. H. Cocks, on the breeding of the Otter (tom. cit. p. 100), you were good enough to insert a note of mine in which I endeavoured to show that, so far at least as the county of Norfolk is concerned, the Otter almost invariably breeds in winter. Eleven years have since elapsed, and as several other instances have come to my knowledge in which I could fix the age of young Otters with certainty within a few days, I should like to supplement my previous remarks with this additional experience. I will not trouble you with details in those cases for which I can personally vouch, but may state that in every instance I have full particulars, and where there was any difficulty in fixing the date of birth with some degree of certainty I have omitted the case altogether. I am quite convinced the vague statement that the Otter produces from three to five young ones in the month of April or May cannot be substantiated, and where young Otters are seen with their parents in the latter month it is more than probable they are three months old. One instance only has come under my own observation in which it could be proved that young ones were produced between the months of February and October.

The first entry in my note-book upon which I can fully rely was made on December 9th, 1851, and since that date I have notes of six litters of young Otters born in January, six in February, one in April, three in October, and seven in December; these I will number one to twenty-three inclusive.

I have also notes of old bitch Otters which were giving suck at the time they were killed, as follows:—One in January, one in February, one in October, and three in November; thus I may say that in twenty-nine instances all, with a single exception, gave birth to, or suckled, young between the months of October and February, both inclusive. Of the April litter there can be no doubt, as the young were found in the lair on April 11th, 1879, and could not have been more than a week old.

Referring once more to Mr. A. H. Cocks's paper (Zool. 1877, p. 100), I showed (p. 173) that in at least six out of the ten

instances there adduced, the birth of the young might with certainty be referred to the autumn or winter months. The particulars will be found at p. 173 of the same volume, and these I will number from 24 to 29 inclusive. There were also four other records which I doubtfully referred as follows:—(No. 30\*) November, (31\*) March, (32\*) October, (33\*) May. (Doubtful cases I will mark with an asterisk.) At the same time I mentioned a baby Otter (34) picked up dead on the banks of the river Want, December 15th, 1872; two others (35) killed near Maidenhead, January 10th, 1875; and a third instance (36) at Llechrhwyd, in January, 1875. These were recorded at various dates in the columns of 'Land and Water.'

Again, in 1882, at p. 201 of 'The Zoologist,' is a most instructive paper on the breeding of the Otter, by Mr. Cocks. A female Otter (37), received by him in March, and weighing 2\frac{3}{4} lbs., would be probably not more than three months old, which would place its birthday in the month of December, at the earliest. In two instances female Otters in his possession came into season in the month of August, and a litter (38) was born about October 12th.

I have before remarked that I do not place much reliance upon these instances, as the animals were not in a state of nature; but so far as they go, they tend to support my views. Mr. Cocks's young Otter came into season in the month of August, when ten months old, and the period of gestation being (as he has shown) sixty-one days, a young Otter would probably have her first litter when twelve months old, and it seems not unlikely, as the young ones remain for about nine months with their parent, that this first date of reproduction would govern the period of subsequent births. It would thus follow that in a state of nature, the Otter might be expected to be a winter breeder.

In looking through the pages of 'The Zoologist,' I find several other records of the breeding of the Otter, which may be quoted here. The two instances given at pp. 122 and 172 of the volume for 1879 are already included in my own notes. In the volume for 1877 I find it stated that Mr. E. H. Rodd saw, on December 5th, a very young Otter (39) in Mr. Vingoe's laboratory at Penzance.

In 1885 (p. 168) Mr. M. Browne mentions the capture of an old female Otter and four blind young ones, on the banks of

the river Soar, in "the spring of 1817," also two other young ones at Loughborough in the month of March, 1884, but the circumstances are not sufficiently exact in either instance to be of much service for my purpose. I therefore omit them from my summary.

Again, in the volume for 1886, p. 67, Mr. A. P. Morris records the finding of three newly-born Ofters (40) by some sedge-cutters on October 8th, 1884, near Salisbury; also the capture of a young one (41), which he conjectures would be four or five mouths old, on March 21st, 1885. He adds that on another occasion, in the month of November, three young ones (42) were found in a nest in a faggot-heap and killed, "because they were too young to keep." The same writer states that in the month of October two young males (43\*) were procured, weighing "above 4 tbs." each, and in November two others (44\*), of about the same weight; these, if the weight is correctly given, would probably be about four months old, but the record is indefinite. One more instance of the finding of very young Otters occurs in 'The Zoologist' for 1887. It is there stated that two of these animals (45), newly-born, were found under the floor of a boat-house in Hampshire on August 14th, 1886; but an even earlier instance is reported in 'The Field' for August 7th, 1880, where it is stated that a young Otter (46), evidently newlyborn, was found on the banks of the river Cocker on July 26th. On the other hand, I may mention that an equally infantile Otter (47) is stated in 'Land and Water,' December 18th, 1880, to have been found on the banks of the river Dunsup (Yorkshire) on November 17th.

An old marshman at Stalham Fen, who has spent the whole of a long life amongst the haunts of the Otter, assured me that very young Otters are frequently met with in February, and that the old female when heavy with young will leave the trail of her belly as she crosses the snow, and by this they know that the young must be produced very early. This man told me that a litter was once found there of five young ones—the only instance I know of more than four being produced at a birth.

As an example of the absence of exact information with regard to the breeding of this animal in a good observer and sportsman, I may quote Charles St. John, who, in his 'Natural History and Sport in Moray,' upon finding young Otters (48),

"apparently not three weeks old," on November 17th, thus expresses himself, "I have often fancied that the Otter breeds at various seasons, and not regularly, like most wild animals." Probably, had he given more attention to this subject, he would have found that the irregularity, although remarkable, was not so great as he seems to have supposed.

On analyzing the above records, I find that of the forty-eight instances mentioned, forty-two may be considered quite reliable, and six must be classed as doubtful. Of the former nine must be referred to the month of January, eight to February, one to April, one to July, two to August, one to September, seven to October, four to November, and nine to December. The six doubtful cases are thus distributed:—March, one; May, one; June, one; July, one; October, one; and November, one. There are forty instances of the birth of young ones between September and February (both inclusive), two of which only are doubtful, and eight between March and August, four of which must be considered doubtful; that is to say, the records are not sufficiently exact for the period of birth to be fixed with certainty.

I have here endeavoured to state as impartially as possible the facts which have come to my knowledge upon this subject, and I believe I am justified in arriving at the conclusion that the Otter breeds in autumn and winter, but more often in winter; and that litters in the spring are very rare, one solitary instance only having come under my own observation, that being in the month of April. I have found reliable statistics very difficult to obtain, the bulk of those recorded being, for some reason or other, too inexact for my purpose; and the twenty-three cases analyzed at the commencement of this paper, which have all more or less come under my personal observation, extend over a period of thirty-seven years, during which time I have notes of the particulars of the occurrence of more than two hundred Otters in Norfolk alone; but of late years I have not kept up my notes very diligently.

### THE ART OF TRAINING PIGEONS IN THE EAST.

(Concluded from p. 219.)

Abul Fazl says that the Emperor's Pigeons used to accompany his processions. The Kahars carried the pigeon-houses, and the birds sometimes rested in them, or flew overhead and went along in the air with the procession. This is quite correct, and I agree with the Sheikh. At the present day the Pigeons of Bahadur Shah have been seen to accompany his processions, the only difference being that the pigeon-houses were carried on carts, and the Pigeons above kept pace with the procession as far as Eed Gah. Moreover, the King's throne (hawadar, or seat), on elephant-back, proceeded under the shadow of these Pigeons; in other words, they formed a sort of canopy over the King's head. When the procession passed through the Lahore Gate of of the city, the birds descended downwards and kept fluttering over the King's head, even within the gate, and as soon as the throne had passed out of the gate, they reascended without ever touching the ground all this while.

Abul Fazl states that the Emperor's Pigeons cannot be numbered. There were more than 20,000, nearly 500 of which were celebrated for their skill and cleverness. He adds that in former times the pigeon-keepers used to distinguish these birds birds by the turn of the feet, or chak-i-chashm, or the sides of the beak, and took great pains in doing so; but that the Emperor devised several new marks of distinction whereby all difficulty was removed—viz., the eye, sides of the face, claws, and position of the nostrils.

From the above I understand that before Akbar's time, the Vilaiti Pigeons were usually examined and distinguished by the turning of their feet, the cleft of their eyes, and the opening of the nostril. Beyond this the poor simple Vilaitees knew nothing; hence their perplexity at anything that could not be ascertained from these three sources of distinction. The Emperor therefore fixed on several other distinguishing characters—namely, both sides of the eye,—that is, under and above the pupil,—eight claws (which were supposed to indicate what the turning of their feet did in former times), and both sides of the beak. Names also were given to the various breeds, and birds of different kinds

were mated. From the white Pigeons were obtained coloured young ones, and from coloured birds white ones. Different kinds of Pigeons were thus crossed, and the characteristic markings of some were produced in others, to such an extent that the account of these different breeds and their various colours and names filled a large volume.

Abul Fazl says the Emperor recognised ten grades. I say that these grades indicated their order of merit. The Emperor divided all his Pigeons into several grades. Those of the first grade were the very best of their kind, rare, and obtained at great cost. According to Abul Fazl, they were brought in and sold by poor people, who were paid so much for them by the Emperor that they became rich. Those of the second grade were mongrels, or Doghla, the word being a corruption of Doghal. The Sheikh says that the price of second-grade Pigeons was three rupees per pair; of the third, two and a half; of the fourth, two; of the fifth, one and a half; of the sixth, one; of the seventh, twelve annas; of the eighth, eight annas; and of the ninth and tenth, six annas.\* He states that amongst the Emperor's Pigeons the descendants of Mohna held the first rank, all other breeds giving place, amongst which that called Ashki was regarded as distinct. comes the Char-zarahi breed, whose ancestor was one of the Magasi Pigeons of Hayi Alli, of Samarcand. I say that these two breeds, Ashki and Char-zarahi, are quite unknown at the present day, nor does anyone know anything about them. Abul Fazl says that Oodi Pigeons have descended from a cross of these two noted breeds. I understand that Oodi and Magasi birds are

<sup>\*</sup> The Sheikh mentions three ashts as the price of the ninth- and tenth-grade Pigeons. I have translated "three ashts" as "six annas," my reason being that asht is not a Persian word. There is, indeed, no such word in Persian, except ashta, which means "haste," and can have no connection here. Besides this the letter t is not in either the Persian or Arabic alphabet, although the soft t or tai is. The hard t is either Hindi or English. Now in Hindi, asht means eight, and the Sheikh, who calls the equivalent of eight annas nirn,—i.e. half a rupee,—meant by three ashts three-eighths of a rupee—i.e. three two-anna pieces, or six annas. Since at that time Bhahsta was the dialect generally spoken, asht was the common name for the then current coin worth two annas; hence the employment of this term by Abul Fazl.

still to be found, chiefly at Cabul. They are obtained by crossing Kali and Atshi-badrang. Ooda or Oodi birds are offspring of black Taoosi at the present time.

Abul Fazl says that next to these several other Saths, or other breeds, were presented to the Emperor. Certain royal Pigeons were of the following colours—magasi, yarahi, awiri, and zamiri. The last is a mixture of zarahi and awiri. I say that this breed is no longer to be found or heard of. Other kinds are Chini, Nafti, Shafki, Oodi, Surmai, Kishrnishi, Sunali, Halvai, Jigri, Nabati, Doghi, Vashki, Jilani, Ruya, Nilofari. The first seven of these are still obtainable, but the remainder are now unknown. The Sheikh says that Arzak is a colour between yellow and Nakhudi. I say that Arzak is a well-known colour between light yellow and bright red. Other colours are Atshi, Shaftalu, Gulgaz, Zard, Kaghyi, Yagh, Agrai. Agrai is a colour between Nabati and Kishwishi. Mohurrahi and Kizri between Sabz and Oodi. These names were bestowed by the Emperor. I say that Atshi, Shaftalu, Yard, Kaghzi, Yagh, and Agrai are still to be seen at Delhi and Lucknow. Gulgaz is no longer heard of. Gajrai, most probably corrupted into Kizri by the natives, may still be found. The names Abi Sarmak, between Surmai and Magasi, were also bestowed by the Emperor, and the different breeds were Tarah, Kalsar-durn, Ghazah, Yakrang, Halkum Safaid, Par Safaid, Kullor, Gharghar, Magh-i-Babri, Ala-bur, Kalya Sar, Mahdurn, Toidar, Marvarid-sar, and Mashala-durn.

All I can say regarding these colours is mere theory or conjecture, for I have never indulged in such diversion myself, nor have I ever been fond of Kabutar-bazi. By Kulsar is meant perhaps Kulsara; Dumghanga is perhaps corrupted into Dumgaza; Halkum Safeid-par is Bamna—there is also one Safeid-kulla; Ghurghar is perhaps Ghagra; Magh-i-Babri is Magh Babra; Alah-bur is Alpara; Kalya-sar is beyond my comprehension, but may be Kalesra; Mahdurn Toghdar is perhaps Marvarid sar Mashala Durn.

Abul Fazl says that besides these, there were many other Pigeons whose colours only were mentioned, but through the Emperor's attention to them they became celebrated also for their skill. Karkara-palak, Peyazi-palak, Nigari Rekhta-palak, and several other charming Pigeons, though not able to perform

any feats, still delight many people by their variegated colours. Koka, for instance, charms us by its melodious voice. In my opinion, however, Yahu is the Pigeon whose voice is indeed charming; but any Pigeon which coos musically is called Yahu: they coo every morning like devotees. Bugha awakens us at dawn with its sweet notes; it has probably derived its name from the guttural sounds which it produces. Abul Fazl (or, as he was also called, Allami), observes that Laka has a very haughty bearing, and moves its tail and neck in an ostentatious manner. But Alai (i. e. the writer) says that the Laka breed still exists, and really struts very gracefully. Allami remarks that the Lotan breed when released becomes agitated, and flutters on the ground like a wounded bird, or one that has been half-sacrificed; sometimes it will begin to flutter if an open hand is struck on the ground before it, and sometimes also when it comes out of its cage and touches the ground with its bill. This kind of Pigeon has a white crest on the head, and as it has a great deal of moisture or humidity in the head it is apt to flutter about as if wounded. This fluttering is of three kinds-viz. dusti, kalami, and havai. If you give it a shake, by grasping its neck between your fingers, it will fall over and flutter, and this is called dasti; secondly, if it fall and flutter on your striking it with your finger on the bill it is kalami; thirdly, when it falls over, through fright, or even at the flight of a bird overhead, it is called havai.

Khirni Pigeons are noted for their flying. Abul Fazl says the male flies so high in the air that it almost disappears from view, but as soon as the female is brought out in a cage and shown, the male at once descends and is soon by her side. In coming down some of these Pigeons descend with one wing contracted and the other expanded, while others have both extended or both pressed closely to their sides. I say that this Khirni Pigeon is not Kheira, for this is only the name of a colour, viz., a Sabz Pigeon, with a white head, but not spotted. It has, moreover, no such quality as above stated. Hence this Khirni Pigeon is quite different from the Vilaite Pigeon. Here in India no one has ever heard of a Pigeon so attached to its mate that it comes down from the air at the sight of it, though all Pigeons are more or less attached to their mates, and will fly down to them from the adjoining walls or houses. They evidently recognise them, and seldom leave them alone when they are about to lay.

Ratah Pigeon.—The Sheikh remarks that this breed is well known for letter-carrying, and that both male and female are trained to take letters to distant places. I say that this breed is quite unknown at the present day, nor are any kinds of Pigeons now used to carry letters in India; hence no one knows anything about this Ratah bird.

Nisavri Pigeon.—Abul Fazl says that these Pigeons fly as high as Khirni Pigeons, and like the latter are often lost sight of, even remaining away for a day or two, and on their return they never miss the way to their nests. A Parpa Pigeon, according to Abul Fazl, at once takes the air, and will continue flying by itself. Even Saths, or small parties of them, will fly by themselves as if they were but one Pigeon, and many of them impart information. I say, this is a specimen of the flattery and adulation so prevalent in the days of Asiatic monarchs. The fact is that Nisavras artainly fly very high, and Parpa and Pamoz are not unlike them. Some of them are Sada-pa, but they are scarce, and not much liked at present. Parpa and Pamoy (or as they are also called, Phalpera and La-chidar) are, of course, approved of.

Abul Fazl says that Shirazi, Shustri, Kashani, Jogya, Rezah Dahan, Magsi, and Golas, are all wild and wanderers of the desert, and that people sometimes tame them, and make them familiar with their dwelling-place. They fly off to the forest, and on their return are given salt and water, which makes them bring up all they have eaten in the forest, and this serves in a great measure for their owners' or trainers' livelihood. I say, however, that such is not the case in this country. There is no one in India who adopts such a plan.

Abul Fazl says that a Pigeon seldom lives above thirty years, and that for 100 flying Pigeons 4 seirs of grain is quite enough; for others, 5 seirs; and for those selected for laying,  $7\frac{1}{2}$  seirs will suffice. He says that the flying Pigeons receive pure arzan, which probably means chaina grain. I say that Indian Pigeons can hardly eat as much. They have no great power of digestion;  $2\frac{1}{2}$  seirs is the largest quantity of grain generally allowed for 100 flying Pigeons. More than this would make them refractory and disobedient. But if not used for flying, 4 seirs of grain would suffice. An equal quantity is given to those selected for laying. In this country bajra (a kind of millet) is given them.

Abul Fazl says that except such as are used for flying, all

other Pigeons are fed on a mixture of seven kinds of grain, viz., rice, pulse or chana, moonz, china, kajar or kojar (a product of the eastern parts of India), Lahdara (a produce of Oudh), and millet. Here in India, I say, they receive nothing but bajra, though in the eastern provinces and Bengal, they are sometimes fed on dhan also.

Abul Fazl states that a great number of the Emperor's servants looked after his Pigeons, and gained an insight into the art of Pigeon-keeping, and he names the most celebrated of them:—

Kabutar-baz.—Kul Alli of Bukhara, Hasti of Samarcand, Mulla Yada (son of Mulla Ahmud Chela), Mukbil Khan Chela, Kawga Sandal Chela, Momin Harir Abdul Latif Bukhari, Rajah Kasin Balkhi, Habib Shahr Sabzi, Sikandar Chela, Maksud Sawarkundi, Rajah Pahlwan Chela, Ira Nund, &c.

The members of this establishment belong to the Military Department, and hold different ranks in the army. A foot-soldier's monthly pay varies from 2 rs. to 48 rs. One of them, Habib Shahr Sabzi, is the same Kabutar-baz who resided in Shaharkash, or as it is also called, Shahar Sabz. He was summoned from Farghana in Turkestan. Mention is made of Habib's coming to India in a letter, which also contains an account of several kinds of Uranan, or Flying Pigeons, being received from other countries. All these events occurred in the 9th and 10th centuries. Beyond this nothing is known of Akbar's Kabutar-bazi, of which nothing save a dry story survives.

It has neither been, nor can probably be, ascertained when or where this diversion first commenced. In Persia, of course, it can be traced to the time of the Safavis; and after the year 800 A.H. it was pretty well known in that country; while in Turkestan, the native gentry, called Khavanin, used to indulge in it so early as in the year 700 A.H. Following are the names of some of the gentlemen who were fond of this diversion:—Babir Abu Sayid Mirza, Omar Sheikh Mirza, and Shahrukh Mirza, who traced their descent from Amir Taimar Gorkan.

In India it originated, and was perfected in the time of Akbar the Great. Among the Hindi Rajahs it was rarely indulged in, the reason being that to catch a bird and to keep it hungry, to make it fly and perform other works of labour is opposed to their religious prejudices, and regarded as cruelty, although

feeding them without depriving them of their liberty, is considered an act of humanity, and consistent with their religion.

In a work entitled 'Kasas-ul-Aubeya,' composed by Abdul Vahid, a Muftizada of Bilgran, some time after the year 1240 A.H., I have seen it mentioned that men of the Loot tribe used to indulge in this diversion, but they were visited with the wrath of God, and were destroyed while living in Sodom and Gomorrah in Syria. A detailed account of this tribe is given in the Old Testament, in the book of Genesis, chap. xix., in connection with the Patriarch Loot, and also in Mahomedan, Alkoran Soorah Valzaryat.

Pigeon-keepers, or Kabutar-baz, administer various kinds of medicine to their Pigeons when they are taken ill. They also give them certain other drugs to make them lay eggs and bring up good and new kinds of young ones. Good food of all kinds is given them, to make them learn to fly and perform feats of strength with ease and accuracy. This food is not composed of grain, but the very best dishes are prepared with butter, &c., at a great cost, and given them to eat. The pigeon-keepers of Lucknow and Delhi, as well as such of the well-to-do gentlemen as are fond of this diversion, are quite conversant with the different medicines and dishes prepared for their Pigeons. I myself have never indulged in it, for my father never allowed me to take up any such pursuit, hence whatever I know, or whatsoever I have here written, is the result of my own researches on the subject.

Pigeons were used as letter-carriers in Egypt about 800 A. H., when Amir Taimar Gorkan returned from Barsai, after his battle with Bazarged Zaldaram.

I have compiled this treatise in obedience to an order from my kind benefactor and old patron, without any aid, except from the Ain-i Akbaari, which I have translated to show what Abul Fazl has said on the subject.

# NOTES AND QUERIES.

#### MAMMALIA.

Leaping Powers of the Hare. While rambling in the winter-time over the snow-covered plains in this region, I have recently interested myself in ascertaining how far, on a level surface, a Hare or Rabbit may leap at each spring, at a time when either of these animals is put to its best speed. Two species of Lepus are quite abundant in this vicinity, viz., the Mexican Hare (L. callotis callotis), and the Sage Hare, which is really a medium-sized Rabbit (L. sylvaticus Nuttalli), while the first-mentioned is a big Hare. It is not uncommon to find here, in certain localities, a stretch of perfectly level prairie extending for a distance of three or four miles, and when this is covered by an even layer of one inch or more of snow, it offers an admirable surface on which to take account of the distance which may separate any two tracks of one of these animals, either one made by a Hare, or one made by one of the Rabbits. On such a prairie as I have just referred to, I have on numerous occasions fired at these animals when they have been running, and at the same time beyond the range of my fowling-piece; such a shot almost invariably has the effect of so alarming the game as to make it run at its very best rate of speed, and upon coming up with the tracks they have left on the snow at such times, I have been surprised at the distances they can clear at each individual leap. Under these conditions I once measured the spaces cleared by an old Mexican Hare, and found the first two equalled 12 ft. apiece, while the third effort was rather more than 13 ft., and I have never known this species to exceed this, although I have tested not a few of them. Of course the Rabbit cannot compete with such magnificent gymnastics as this: it will, however, when thus frightened, make leaps of fully 6 ft.; and on one occasion I measured one on the dead-level prairie, which was rather more than 7 ft. At their common rate of going the Hare rarely clears more than 4 ft. at any single leap, while the Rabbit is satisfied with rather more than 2 ft., and, when quietly feeding about the sage-brush, the tracks made by an individual of either species may actually overlap each other .- R. W. Shufeldt (Fort Wingate, Ne v Mexico, Dec. 6th, 1887).

[If any of our readers have made similar experiments with English and Scotch Hares we should be glad to receive details for publication.—Ed.]

Hare; number of Young at a Birth.—My keeper (J. Shave) found a Hare's form last week containing five leverets not more than a day old; they were evidently one litter, for they were all of one size. Shave, who has had a long and wide experience, tells me he has never found more than three in any Hare out of the many hundreds he has "paunched," and that

one is the usual number in the case of a young Hare, and two in the case of an old one.—J. C. MANSEL-PLEYDELL (Whatcombe, Blandford).

Vespertilio Bechsteinii and V. mystacinus in Hampshire and Staffordshire.—Apropos of the articles on British Bats which have appeared in recent numbers of 'The Zoologist,' I may mention that I took two specimens of V. Bechsteinii, in the New Forest, in July, 1886. They were living in a hole made by a Woodpecker; there were several more of them, probably about a dozen altogether. One of these specimens has recently been inspected by Mr. Oldfield Thomas, and identified by him as V. Bechsteinii. The New Forest seems to be the only English locality for this Bat, and it has not been recorded from there in recent years. A specimen of V. mystacinus, now in my possession, was taken in a cave near here in November last. This is only the second specimen recorded from this county.— E. W. H. Blage (Cheadle, Staffordshire).

[Two examples of V. Bechsteinii, taken at Preston, near Brighton, are in the possession of Mr. F. Bond.—Ed.]

The Beaver in Norway.—In a brief account of the Norwegian Fauna, by James Greig (Zoological Curator of the Bergen Museum), published in Giertsen and Halvorsen's 'Norway Illustrated' (4to, Bergen, 1888), it is said of the Beaver that it is now only to be found, in quite a restricted number in Drangedal, in the county of Nedenoes, and also near Kragero.

Risso's Grampus in the River Crouch.-Mr. J. A. Laver, of Hockley, Essex, informed me a short time ago that about September 5th, 1887, some workmen in his employ discovered a cetacean stranded on the saltings on the north side of the River Crouch, in this county, a few miles above the spot where Rudolph's Rorqual was captured last year, of which Professor Flower gave a description after its removal to Southend. My informant, although no naturalist, gave so good a description of the animal that I was at once convinced it could be no other than Risso's Grampus, Grampus griseus. He told me that it was cut up and boiled for the sake of the oil, of which it produced a considerable quantity; that the skull had been roughly split, and the lower jaw containing seven teeth had also been divided. I at once made application for any remaining portions of the skull and other bones. These were accordingly sent me, and have been examined by Prof. Flower, who has confirmed my identification. informant describes the specimen to have been 10 ft. 10 in. long; pectoral fins about 20 in. long; seven teeth in lower jaw, shutting into sockets in the upper; back black, with irregular markings (as if from old wounds), lighter below; forehead rounded, more so than appears in the specimen figured in 'The Field,' March 13th, 1886, which he has since seen. He also says this rounded forehead was as full of a clear white oil as is an orange of juice, enabling him to ladle it out. The rest of the oil produced by the animal was liquid and thinner than any animal-oil he ever saw. He now regrets that from his ignorance of the value of the specimen he allowed it to be destroyed. He describes the lungs as very dark, and so like liver in appearance that he could not distinguish one from the other by colour. The capture of this cetacean occurs so rarely on our coasts (five times only) as to make it worth recording, especially as this is the first specimen which has been found east of the Straits of Dover, and so far north. Without doubt many other cetaceans suffer a similar fate, the popular idea being that all the larger ones are Whales and all the smaller ones Porpoises (although some of them are distinguished by such names as "finners," "bottle-noses," &c.), and that there is only one thing to be done with them, namely, to extract the oil, in ignorance of the fact that entire specimens would often fetch more money for museum purposes than could otherwise be obtained.—Henry Laver (Head St., Colchester).

Swedenborg's Whale.—At a recent meeting of the Scientific Society of Upsala, Dr. C. Aurivillius read a paper on the skeleton of the so-called Swedenborg Whale (Eubalena svedenborgii, Lillj.), discovered last November in the province of Halland, in a layer of marl 50 ft. above the sea. Remains of this species of Whale have only been found once before, viz., early last century, when some parts of one were discovered in the province of Western Gothland, 330 ft. above the sea, and 70 miles inland. It was at first believed that they were the bones of some giant, but it is said that Swedenborg discovered their true nature. The skeleton has been presented to the Upsala Museum.

BIRDS.

The Re-appearance of Pallas's Sand Grouse in the British Islands. -Letters from all parts of the country have reached us, announcing the re-appearance of Pallas's Sand Grouse, generally in small flocks, and several single birds have been picked up dead, having come in contact with telegraph-wires. Prof. Newton reports that he has seen three eggs which agree in all respects with authentic examples of those of Pallas's Sand Grouse, and which were taken in this country on May 20th. It is to be hoped that if any others are discovered they will be left to be hatched, that the fact of the young being reared in this country may be satisfactorily established. We are glad to learn that at a recent meeting of the Norfolk and Norwich Naturalists' Society, Mr. J. H. Gurney, jun., President, in the chair, measures were concerted for the protection of these birds, and letters directed to be addressed to all the principal landowners in the county with that object. In addition to the live specimen sent to the Zoological Gardens from Berwick, on June 2nd, two others from Scotland have been lately presented by the Duke of Argyll. The following letters on the subject reached us too late for insertion with those which appeared in the June number of 'The Zoologist':-

Scotland.—As many readers of 'The Zoologist' are doubtless looking for records of the occurrence of this interesting species throughout the country during the past fortnight (May 14th to 28th), I venture to send you the following notes regarding their appearance in this district:-The first intimation I received of their arrival was from a birdstuffer in this city, who, on the forenoon of May 17th, showed me three (a male and two females), which he had that morning received from Dunbar. They had been killed the previous day, out of a flock of about twenty, while feeding in a field on a farm in the neighbourhood. Their crops were full of cloverseeds. At midday I had a note from a friend informing me that a person who had been pigeon shooting the previous evening at Tyne Estuary had fallen in with a flock of about the same number resting on the sand-hills. and had secured three, two males and a female. Being more anxious to see them alive than dead, I proceeded at once to Dunbar, and was soon on the "links" adjoining Belhaven Sands, where I had the good fortune to meet with first a flock of fourteen, and then with a party of four. The same gunner who obtained the three on the sands the previous day, had got another-a female-this morning (the 17th), and I found a fine male bird lying dead on the "links," where another-also a male-was picked up dead the following day. They were again seen on these "links" on the 20th, but not since, so far as I am aware. Subsequently I received tidings of their appearance in several other localities, viz.: -At Oldhamstocks, near Cockburnspath, Berwickshire, where a flock of twenty-four were seen on the 17th, and five (two males and three females) killed. Near the railwaystation, Stow, Midlothian, where one (a male) was killed against the telegraph-wires, and picked up quite fresh on the 18th. Pentland Skerries, Orkney, where three (females) were secured out of a flock of twelve on the 17th. In Unst, Shetland, where two (a male and a female) were killed on the 18th. To the west of North Berwick, where a flock of about a dozen were seen by a party of golfers on the 24th; they were flying in a westerly direction, and appeared to have come in from the sea. Between North Berwick and Tyne Estuary, where two males and a female (which I have just seen) were shot, I understand, on the 26th. At the foot of the Pentland Hills, above Balerno, about ten miles west of Edinburgh, where for over half-an-hour on the 26th I watched a flock of fifteen feeding in a field which had been recently sown with oats and grass; they came from the west, and, on taking wing again, proceeded on their eastward (and coast-Near Aberfeldy: one, a female, having been sent to Edinburgh for preservation; near Elie, Fife: one, a male, also sent here for preservation. Lastly, I have just heard that a flock was seen a few days ago on the Carse, between Stirling and Alloa, and two of them shot. Up to the present moment I have handled altogether twenty-five (twelve males and thirteen females), and seen in life thirty-three of these Asiatic

strangers; much valuable information regarding their habits, food, measurements, &c., having thus been obtained from personal observation. I cannot, however, but regret having had to chronicle the deaths of so many, though personally I have not lifted a hand against them. From the state of the ovaries in several I have dissected I do not doubt that they would nest with us if unmolested.—William Evans (18A, Morningside Park, Edinburgh).

I daresay you have seen accounts in the newspapers of flocks of Pallas's Sand Grouse having arrived in Scotland. A few were obtained here (Anstruther, Fifeshire), and I was fortunate enough to obtain a pair of them on May 26th. Apparently they have been in this neighbourhood some time. A few only were got. In the crops of the ones I obtained were a few grains of barley, and a good lot of clover, with other small seeds.—John Ross (Anstruther, Fifeshire, N.B.) [Communicated by H. W. Marsden.]

Yorkshire.—In addition to those reported by me near Burniston (p. 234), I saw two flocks of Sand Grouse on the morning of May 28th near Scarborough, one of about eight, the other of nearly twenty birds. The small flock appeared very wild, and would not allow a nearer approach than eighty yards.—R. P. HARPER (10, Seamer Road, Scarborough).

Cambridge.—Several flocks of Sand Grouse were seen in the neighbourhood of Newmarket and Mildenhall between June 10th and 13th. One flock of about twenty, on Newmarket Heath on June 7th, alarmed by the morning gallops of some race-horses, flew up suddenly as the horses passed, and four of them coming in contact with telegraph-wires were killed on the spot.—W. Mayd.

Norfolk.—The following particulars of six Sand Grouse shot at Downham, Norfolk, and recorded in the 'Standard' of May 26th, have been sent me in a private letter:—"In reply to yours of the 27th, a Mr. Watson was on his farm shooting rabbits, when about thirteen Sand Grouse came flying past; he shot at the lot, and killed six at one shot, and, finding them very uncommon birds, he brought them to me, being a bird-fancier. I have sent them to Mr. Howlett, of Newmarket, to be stuffed." A local paper, dated May 26th, states that Mr. Howlett has also received another fine specimen, taken at Mildenhall.—Julian G. Tuck (Tostock Rectory, Bury St. Edmunds).

Suffolk.—The following are, I believe, unrecorded occurrences of Sand Grouse in Suffolk:—Female, Southwold, about the beginning of June, sent to Mr. Travis, of Bury; male and female, received by me in the flesh from Aldeburgh, June 8th (no particulars given); male, shot at Bradfield St. George, near Bury, June 11th, sent to Mr. Travis, and preserved by me; flock of about thirty seen at Sicklesmere, near Bury, about the same time.

—Julian G. Tuck (Tostock Rectory, Bury St. Edmunds).

Essex.—These birds have made their appearance in Essex. A flock of about twenty were seen at Barking Side on June 4th, and two were

subsequently shot, which proved to be adult males. I myself came across about a dozen of them in a ploughed field near Blake Hall Station on the Ongar line, Great Eastern Railway, on June 10th.—A. F. GATES (Marsh Gate Lane, Stratford).

My brother, Mr. G. F. Mathew, R.N., informs me of a flock of five having been seen near Harwich towards the end of May.—Murray A. Mathew (Buckland Dinham, Frome, Somerset).

Kent.—Will you kindly allow me to place on record in 'The Zoologist' what I have not the least doubt was an occurrence of Pallas's Sand Grouse in this neighbourhood (St. Peter's, Thanet). A bird was first seen on May 30th, and was then feeding on a field of recently-sown spring tares. What first attracted my attention to it was that it did not rise and fly away when I entered the field, as was done by several wild Rock Doves, which were feeding near it. However, it would not allow a very near approach, but ran with considerable speed over the ground with its body close down, and looking almost like a small animal. When at last made to fly, by a dog I had with me, it went at a very rapid pace, and looked much like a Golden Plover, only larger, uttering as it flew a low piping note. On the morning of the following day (May 31st) this bird again made its appearance in the same field, but all attempts to get near it were futile. I must not omit to say that the colour, as seen from a distance, was light greyish brown.—H. S. D. Byron (Bromstone Farm, St. Peter's, Thanet).

Hampshire.—It may interest your readers to know that I saw a pair of Pallas's Sand Grouse (Syrrhaptes paradoxus) at a birdstuffer's at Portsmouth on the 31st ultimo, which had been obtained a few days previously on Hayling Island, in Hampshire, just over the Sussex border. They were killed out of a flock of about a dozen on Sinah Common, a district of sandhills and shingle.—William Jeffery (Ratham, Chichester).

On the evening of May 20th a flock of between thirty and forty Sand Grouse were observed flying across Broxhead Common, between Wolmer and Aldershot. They were flying very fast towards the north-east.

I have lately examined a specimen of Pallas's Sand Grouse, which was picked up in the New Forest on June 2nd, having been killed by flying against the telegraph-wires. It was a female, weighing 8½ ounces, and was in good condition except that its neck, breast, and one wing were much damaged by collision with the wires. Its crop, which was cut to pieces, must have been full of small seeds (some of which I enclose for identification), and some few of the same I found in the gizzard. I counted twenty-seven eggs in the ovary, but they were very minute, the largest not much exceeding in size the head of a pin. Its most remarkable feature, of course, was the structure of the foot, so different to anything I had ever seen before, without a hind toe, the under part forming quite a pad thickly covered with small round warty protuberances, whilst the whole leg and foot

are thickly clothed with short feathers down to the blunt claws. I have not much doubt that the specimen was one of a flock, as I heard that on the 4th or 5th of June, one or more were taken or seen near Bournemouth, and it is very probable that even previous to the 2nd a flock passed near the same place, as the day before the one above mentioned was picked up another, very much damaged and decomposed, was found not fifty yards away. On June 8th a friend of mine saw a flock of strange birds—seventeen in number—flying swiftly in a westerly direction over the River Avon, and as they flew very near to him he saw what he described as "a dark mark across the breast" of each, and, as the birds were uttering a peculiar noise at the time of their passage, I have not much hesitation in referring them to the species in question. I am glad to say I have not heard of a single specimen being shot in this neighbourhood.—G. B. CORBIN (Ringwood, Hants).

Dorsetshire.—I am glad to say the recent migration of this bird into England, the third and largest on record, has reached Dorsetshire. Six of these birds were picked up dead, or dying, last week at Stoborough, Wareham, on May 28th, under the telegraph-wires—a proof, if any were needed, that the steppes of Tartary are not yet furnished with this higher stage of civilisation. We may now possibly hear of the invasion extending farther west.—J. C. Mansel-Pleydell (Whatcombe, Blandford).

Isle of Man.—On May 22nd some of these birds made their appearance in the Isle of Man. A little flock of eight were seen on that date at the Lhan, and two of them, male and female, were shot. On May 28th one was shot out of a flock of fifteen near Ballaskeg, Manghold.—Philip M. C. Kermode (Ramsey, Isle of Man).

Cumberland.—Up to the 10th of June the number of Sand Grouse killed in Cumberland amounted to nineteen, and two, at least, of the hen birds appeared to be incubating.—H. A. MACPHERSON.

Pembrokeshire.—On May 28th Syrrhaptes paradoxus had reached Pembrokeshire. I have heard from Mr. F. Jeffreys, naturalist, of Haverfordwest, that one (a female) was shot at Ambleston, in the centre of the county, some three miles from Stone Hall, on that date. The number of its companions was not stated.—Murray A. Mathew (Buckland Dinham, Frome, Somerset).

Gloucestershire.—On June 2nd five Sand Grouse appeared on the large fields between Ullen Wood Farm and Seven Springs House, a few miles from Cheltenham, and two or three single birds subsequently appeared there. They were seen to fly over a larch plantation, then wheeled and alighted not far from the spot they had risen from. They were described as "of a reddish yellow tint, with dark bars, and wings very pointed." None were shot, but the description leaves very little doubt that they were correctly identified. Another lot of six or seven birds (or possibly the

same lot) were seen a few days later between Circnester and Northleach, and from eight to ten miles from Birdlip.—F. Day (Cheltenham).

Somersetshire.—On May 25th one was shot out of a flock of eleven on Steart Island, on the north coast of Somerset, near Bridgwater.—MURRAY A. MATHEW (Buckland Dinham, Frome, Somerset).

In a letter which I received from the Rev. C. G. Anderson, dated 26th May last, he says:—"I had a specimen of (I think) the Sand Grouse brought to me this morning. It was shot last night on the shore at Steart. There were eleven in the flock. I sent it this morning to Petherick to be stuffed." I saw this bird at Petherick's on May 30th. It was then very nicely set up, and was an undoubted specimen of Pallas's Sand Grouse, and I should say a male, although Petherick declared that it was a female by dissection; but I think he must have been mistaken. It is an addition to the list of Somerset birds.—Cecil Smith (Lydeard House, Bishop's Lydeard, Taunton).

Two Sand Grouse were seen at Charlynch, a village about three miles from Bridgwater, on the afternoon of May 25th, by the rector of that place, Rev. W. A. Bell, who is well acquainted with the birds, having shot numbers of them in India. One was believed to have been seen at Burnham, but I have not heard the date, and am sending to Mr. W. Stoate these particulars, as they may probably have gone in that direction.—H. St. B. Goldsmith (King Square, Bridgwater).

Devonshire.—A good specimen of Pallas's Sand Grouse is now being preserved at Mr. Rowe's, the birdstuffer of this town. It was shot at Hartland about the 3rd or 4th of June. Three or four others were killed at the same time, I believe, and are being set up by a birdstuffer near there.—J. G. Hamling (The Chase, Barnstaple).

Guernsey .- The first I heard of the arrival of Sand Grouse was from Guernsey. In a letter from Sir Edgar MacCulloch, the bailiff, dated May 24th, he says:—"Whilst I was at dinner, Couch, the birdstuffer, called to show me a specimen of Pallas's Sand Grouse, which was shot on the 21st of this month somewhere in the Vale Parish. It was brought to him by the wife of the man who shot it, and it appears that there was another in its company; but the man who shot it could not look after its companion, as it was time for him to get ready to attend an inspection of the militia regiment he belongs to. The bird is in excellent condition, but a little disfigured about the head with shot. I cannot say whether it was a male or female, but I daresay Couch will discover the sex when he comes to skin it, which he was intending to do at once." I have not seen this bird myself, but I have no doubt the identification is correct. This, so far as I know, is the first occurrence of the Sand Grouse in Guernsey .-- CECIL SMITH (Lydeard House, Bishop's Lydeard, Taunton). [A small flock appeared in Jersey during the last week in May.-ED.]

Pallas's Sand Grouse in Heligoland.—I am indebted to Mr. H. Gatke for the following notes on the occurrence of the Sand Grouse in Heligoland, communicated in a letter dated May 25th :- "On 8th of May, twelve birds; 13th, a score; 14th, some; 15th, some; 16th, flights from five to twenty, twenty-five shot; 17th, L ----, early this morning, on Sandy Island, shot eighteen; 18th, flights from twenty to two hundred head; 19th, a few; 20th, small flocks from five to twenty; 21st, fog, none seen; 22nd, hundreds, many females; 23rd, flocks from ten to forty; 24th, many great flights, fifty to one hundred; 25th, many flights from five to twenty, very cold northerly wind blowing rather fresh." "This is principally to tell you to look after the birds in sandy, gravelly places,—the flat beach at foot at the sand-dunes, like our Sandy Island. On the top of our cliff, the cultivated ground, they are met with in far less proportion, not ten to one hundred. To see the birds when squatting on ground composed of sand, stones, and some dry seaweeds is scarcely possible, and they know this well, because they lay so close. What flyers they are! They beat all we have ever seen here."—John Cordeaux (Great Cotes, Ulceby).

Pallas's Sand Grouse in Scandinavia.—The Sand Grouse seems to have appeared in Denmark and Scandinavia before making its appearance here. In the Island of Bornholm, in the Baltic, large flocks, numbering many hundreds, were seen early in May, some being shot, others captured alive. A few days later birds were seen in various parts of Denmark and Sweden. In Norway a flock of birds was seen at Lister, on the extreme west coasts, on May 12th, and two were shot, a male and female. Their crops were full of tiny black seeds unknown to that country, whilst the eggs in the hen were far developed. During the immigration in 1863 these birds were seen as far north as Nordfjord. In that year, too, many nested on the west coast of Jutland, where the soil is sandy, but the eggs were all gathered by the fishermen.—Nature.

Kites in Dorsetshire.—A pair of Kites frequented the neighbourhood of Dorchester during the early part of the present summer, and would probably have nested had it not been for the untimely death of one of them, which unfortunately ate some poisoned carrion laid down by a vulpicide for the destruction of foxes, by which act both sportsmen and naturalists have been made to suffer. The latter are the worse off, because foxes usually find protection in this part of the world, the coverts in which the above catastrophe occurred being an exception. — J. C. Mansel-Pleydell (Whatcombe, Blandford).

Pied Flycatcher in Ireland.—In his notice of the Pied Flycatcher in Glamorganshire (p. 229), Mr. Digby S. W. Nicholl takes the opportunity of correcting Mr. Seebohm's statement ('British Birds,' vol. i. p. 328) that the Pied Flycatcher "has never been recorded from Ireland." I have, as

Mr. Nicholl correctly states, recorded, in 'The Zoologist' for 1875, the capture of an adult female of this species here at Moyview, Co. Sligo (not Mayo) on the 18th of April of that year, and the specimen may be seen in the collection of the Royal Dublin Society, Kildare Street, Dublin. The occurrence of this bird is also noticed in my list of the birds of the Moy Estuary, in 'The Zoologist' for June, 1877 (p. 237), but, although this specimen is the first recorded to have been captured in Ireland, I have no doubt that many other examples may have passed unnoticed, from the fact that Mr. R. M. Barrington, in the 'Report of the Migration of Birds observed at Lighthouses and Light-ships for 1886,' states that a wing of an individual of this species was sent to him from the Tearaght (one of the Blasket Islands off the Kerry coast), the bird having struck the lantern on the night of the 21st of September of that year. — ROBERT WARREN (Moyview, Ballina).

Honey Buzzard near Bury St. Edmunds.—A fine female Honey Buzzard was shot by a keeper at Culford, near Bury St. Edmunds, on June 11th, and came into my possession in the flesh. Its crop and stomach contained fragments of Blackbirds' eggs and the remains of several unfledged birds. The largest egg in the ovary was about the size of a pea, so I do not suppose it would have nested this year. I can find no record of this species ever having attempted to breed either in Norfolk or Suffolk.

—Julian G. Tuck (Tostock Rectory, Bury St. Edmunds).

Hoopoe in Hampshire.—Early in May I heard that the Hoopoe had been seen in several localities in this county. In one instance a pair frequented a wood for a week or ten days and then disappeared; but during their stay they were very familiar, coming out on a lawn near the wood, and searching for food amongst the grass. Indeed, in every instance the tameness of the specimens was observed. I am glad to say that only one, so far as I know, has been killed, a male in breeding-plumage. I believe a boy caught it or picked it up, as the plumage was quite uninjured. Its gizzard contained the empty skins of three or four dipterous grubs, and a peculiarity I noticed about the beak was that both upper and lower mandibles were quite flat and smooth on the inner surface, without the cutting edges so marked in many species, and doubtless well adapted to its peculiar mode of feeding.—G. B. Corbin (Ringwood, Hants).

Ducks preying on Trout.—I am quite prepared to corroborate Mr. E. L. Mitford's experience (p. 225) with regard to the fact of a duck capturing and eating a Trout. Having in my grounds some thirty-seven Troutponds, I have had some opportunity of observing the habits of birds frequenting them. I was compelled to give up keeping ducks owing to the injury they did to the fish. I question very much if a duck could catch a Trout in a fair chase, but that is not their plan. It is well known how Trout, on being alarmed, seek the shelter of some hole or corner, and it is

from these hiding-places that the ducks drag them. I can well understand the case of a fish being occasionally pulled in two by the operation. Ducks do great harm when allowed free access to Trout-streams. I have watched them frequently, and am quite satisfied that they eat not only Trout, but a great quantity of Trout-food in the shape of mollusca and crustaceans, &c. I shot a Heron at my ponds last autumn, and found on dissection the remains of a rat, but no trace of any fish. Others, however, which I have been reluctantly compelled to shoot, have had Trout in their stomachs. The Waterhen is often seen about the fish-ponds, and I cannot find that it does any harm; and the Common Sandpiper breeds with us every season. Last year I found the nest in my garden, containing the usual four pyriform eggs.—J. J. Armistead (Solway Fishery, Dumfries).

White Stork at Scarborough.—It may be worthy of notice that an example of the White Stork, Ciconia alba, occurred near Scarborough on April 8th. When first seen by a man named Cooper, who sent his dog for it, it was floating dead upon the sea near Peasholm. It proved to be a mature bird in good condition and plumage, but had unfortunately lost so many of the dorsal feathers as to render it useless for mounting as a specimen, and when it came under my observation some days later, decomposition was too far advanced to determine the sex by dissection. The wings have been preserved, and the cranium and sternum are being macerated.—R. P. Harper (Scarborough).

Kestrel nesting in a House.—This spring a pair of Kestrels built a nest in a detached villa near the village of Kellinghall, near Harrogate. They built in a hole under a board which hangs down from the eaves—a most peculiar situation for them to choose. I regret to say that the birds have not fared well, as a neighbouring farmer had them shot, being afraid they would disturb his pigeons. The house is quite near the main road from Harrogate to Ripon, and although it has been built some years has never yet been occupied.—Riley Fortune (Harrogate).

Food of the Kestrel.—A pair of Kestrels, now breeding in our church-tower, have afforded me an unusually good opportunity of watching their domestic arrangements. I found the nest, or rather three eggs laid in a loophole of the tower, on April 27th, and promptly put a padlock on the belfry-door. By April 30th a fourth egg had been added, and on May 26th the eggs were still unhatched, and one at least seemed to be rotten, so it and another were taken. On May 30th I looked at the nest again, and found the two eggs there. As they had been incubated more than a month, I should certainly have removed them, but luckily a faint squeaking attracted my attention, which proceeded from the eggs. There are now two thriving nestlings, which ought to grow apace, as each parent bird has practically but one nestling to provide for. The castings thrown up and the

remains of uneaten food left near the nest show the food of the birds to have consisted almost entirely of mice. I could only find traces of two birds, which were, I think, a young thrush and a lark.—Julian G. Tuck (Tostock Rectory, Bury St. Edmunds).

Dotterel in the Lake District .- An interesting case concerning a rare British bird was heard before the Westmoreland county magistrates at Kendal on 2nd June last. A man named Gilpin, living in the mountain parish of Kentmere, was charged under the Wild Birds Protection Act with having in his possession four Dotterel during the close-time. A police-constable proved seeing the four birds in the man's possession, one of which he obtained and produced in court. The constable deposed that the man said he had been three days on the hills after the birds; that he was obtaining them for an angler, but was unaware he was doing wrong. For the prosecution the police called Mr. John Watson, the hon, secretary of the Lake District Angling Association, who stated that he had made a study of birds all his life, and was well acquainted with the Dotterel. hesitation in saying that the bird produced was a male Dotterel in breeding plumage. In reply to the Bench, witness stated that the birds bred near to the summits of the highest mountains, and that annually about this season they stayed for a few days among the Kentmere hills on their way to their summer nesting-haunts. Although never common they were, owing to persecution, much more rare than formerly. Probably only a few pairs now breed in the Lake District. In some cases dogs had been trained to find the nests, so that the birds might be killed upon them. The feathers of the Dotterel were held in high estimation by anglers for dressing flies, though the skins are much less valuable than formerly. The Bench fined defendant £1 (i.e. 5s. for each bird) and costs, or in default fourteen days' imprisonment. It is to be hoped that this will be a warning to others.

Montagu's Harrier nesting in Dorsetshire.—In 'The Zoologist' for December (p. 464), I reported the nesting of a pair of Montagu Harriers in Dorsetshire. I have now to record a similar occurrence this summer, and in the same neighbourhood, which leads me to suppose it is the same pair. I regret to say they are now lying dead on my table, having been brought to me by a local birdstuffer to be identified. The female was shot on her nest while sitting on three eggs; the male survived her only by one day, and also fell to the keeper's gun, the keeper no doubt priding himself that he had done his master a good service. They are both in fully adult plumage, and it is very much to be regretted that they were destroyed before I could interfere to prevent it.—J. C. Mansel-Pleydell (Whatcombe, Blandford).

#### FISHES.

Note on the Haddock.—The Brixham trawlers stationed here for the season have been recently fishing in the Bristol Channel, and have brought

in a constant catch of Haddock. Thirty-five years ago Haddock was an unknown fish off St. Ives, in the Bristol Channel, and then it was plentiful in and off Mount's Bay. We never had an afternoon's inshore hook-and-line fishing without taking some Haddock. The last catch I made was of seven good fish on a "spiller," in 1858. Since then we have never seen a Haddock on this coast, and St. Ives Bay has not been tried for them. I feel sure none have been seen there, because I have always had friends amongst the fishermen of St. Ives on the look-out for them for me. From some unaccountable cause, the fish seems to have shifted its habitat.— Thomas Cornish (Penzance).

Sparus auratus at Penzance.— On June 11th I received a fine specimen of that rare fish the Gilt-head (Sparus auratus, Cuv., Chrysophrys aurata, Yarrell), which had been caught on a hook and line in the Bay here, in about fourteen fathoms water (the usual fishing-ground). The only example that I had previously seen was caught here in March, 1870. The present specimen is not very brilliant in colour, but its identification was easy. It measured over all,  $19\frac{1}{2}$  in.; eye to fork, 14 in.; depth at origin of dorsal,  $5\frac{7}{8}$  in. Weight three pounds ten ounces. I had it cooked, and found its flesh white, firm, and of excellent flavour, but a little "woolly." I attribute this latter quality to the fact (which I infer from the colours of the fish) that it was not in its best condition for the table.—Thomas Cornish (Penzance).

Spanish Mackarel off Penzance.—On June 20th I caught in the Bay a Spanish Mackarel, Scomber colias, a fish which is undoubtedly rare here. In fact, I had long since set it down as probably a variety of the Common Mackarel, but about this example there was no mistake. Its dentition, eyes, scales under the origin of the pectorals, first dorsal in a groove, colouring, and its peculiar shape, all mark it as distinct from the Common Mackarel. It is a much stouter fish than the common species, and immediately behind the first dorsal the back makes a downward curve, giving the fish the appearance of being hump-backed. It then carries its thickness evenly to behind the second dorsal, whence it tapers to the origin of the caudal. Its measurements were:—Over all,  $12\frac{1}{2}$  in.; depth at origin of first dorsal,  $2\frac{1}{3}$  in.; depth about midway between the dorsals immediately behind the depression,  $1\frac{5}{3}$  in.; depth just behind second dorsal,  $1\frac{5}{3}$  in. Weight eight ounces. The line of oblong dark spots under, and parallel to, the lateral was very conspicuous.—T. Cornish (Penzance.

[Couch, writing of the Spanish Mackarel, says ('Fishes of the British Islands,' vol. ii. p. 79):—"In the memory of many persons it has been not unfrequently caught in nets in Cornwall, where alone hitherto it has been found with us, and sometimes to the number of 300 or 400 at a time, in the summer or autumn; but for several years it has become much more rare."

Some years ago a good many were taken off Brighton (see 'Zoologist,' 1850, p. 2929). According to Turton, this fish is sometimes found in the rivers about Swansea, but never in shoals. Thomas Edward, the Banffshire naturalist, thought he had recognized it on the Banffshire coast. It is a wanderer from the Mediterranean, and apparently does not go far north.—Ed.]

#### CRUSTACEA.

Dromia vulgaris in Cornwall.—It may interest some of your readers to learn that two specimens of the rare crab, *Dromia vulgaris*, have recently been procured off this coast.—G. Tregelles.

[We do not think this species is quite so rare as supposed. It is common (as its specific name would imply) in the Mediterranean, and has been found not only on the coasts of Kent and Sussex, but also in some numbers in an immature state in the Scilly Islands.—Ed.]

# SCIENTIFIC SOCIETIES.

# LINNEAN SOCIETY OF LONDON.

The Centenary Anniversary Meeting, May 24, 1888.—W. CARRUTHERS, F.R.S., President, in the chair.

Messrs. R. Barron, L. A. Boodle, Sydney Klein, and E. B. Poulton were admitted Fellows of the Society.

The following Reports were presented:—(1) Report of the Secretary on the history of the Society and its collections; (2) Report of the Treasurer on the financial history of the Society from its commencement; (3) Report of the Librarian on donations, and additions by purchase, to the Library.

The President then delivered his annual address. A vote of thanks to him having been moved by Sir John Lubbock, Bart, M.P., seconded by Dr. Maxwell Masters, and carried unanimously, the following Eulogia were pronounced:—

On Linnæus, by Prof. Fries, of Upsala.

" Robert Brown, by Sir Joseph Hooker, K.C.S.I.

" Charles Darwin, by Prof. Flower, C.B.

" George Bentham, by W. Thiselton Dyer, C.M.G.

A vote of thanks to the speakers having been moved by Dr. St. George Mivart, seconded by the Rt. Hon. Sir M. E. Grant Duff, and carried unanimously, the Linnean Gold Medal, struck in commemoration of the Centenary, and awarded for researches in *Botany* to Sir Joseph Hooker and for researches in *Zoology* to Sir Richard Owen, was presented by the President to the recipients.

The meeting then adjourned, and the annual dinner of the Society took place at the Hotel Victoria. The following evening a Conversazione was held at the Society's Rooms in Burlington House, and was rendered particularly attractive by the exhibition of a collection of numerous interesting memorials of Linnæus.

June 7, 1888.—W. CARRUTHERS, F.R.S., President, in the chair.

Messrs. G. C. Haité and C. A. Hebbert were elected Fellows of the Society.

The following were nominated Vice-Presidents:—Mr. F. Crisp, Dr. Maxwell Masters, Dr. John Anderson, Mr. C. B. Clarke.

An exhibition under the microscope of decalcified and stained portions of the Test of Laganum depressum was then given by Prof. Martin Duncan, who made some very instructive remarks on the structural characters to be relied on for discriminating the species.

Mr. D. Morris, of Kew, exhibited some drawings of a Fungus (Exobasidium) causing a singular distortion of the leaves of a Lyorica from Jamaica.

A paper was then read by Mr. H. N. Ridley on the Natural History of Fernando Noronha, in which he gave the general results of his investigations into the Geology, Botany, and Zoology of this hitherto little-explored island.

The meeting adjourned to June 21st.

June 21, 1888.—Mr. F. CRISP, Treasurer, V.-P., in the chair, which was subsequently taken by Dr. John Anderson, V.-P.

Messrs. G. C. Haité and R. G. Alexander were admitted Fellows of the Society.

Mr. F. W. Oliver exhibited the aquatic and terrestrial forms of *Trapella* sinensis, of which he gave a detailed account, illustrated by diagrams.

Dr. R. C. A. Prior exhibited a branch of the so-called "Cornish Elm," and described its peculiar mode of growth, which suggested its recognition as a distinct species. In the opinion of botanists present, however, it was regarded as merely a well-marked variety of the common Elm.

On behalf of Mr. R. Newstead, of the Grosvenor Museum, Chester, photographs and drawings of the Little Grebe, *Podiceps minor*, were exhibited to illustrate a peculiarity observed in the mechanism of the leg-bones.

Mr. A. W. Bennett exhibited, under the microscope, and made remarks upon, filaments of *Sphæroplea annulina* (from Kew) containing fertilized oospores.

Mr. Thomas Christy exhibited specimens of natural and manufactured Kola-nuts, and explained how the latter might always be detected.

The following papers were then read:—(1) Dr. P. H. Carpenter, on the zoologist.—July, 1888.

Comatulæ of the Mergui Archipelago; (2) Prof. P. Martin Duncan and W. P. Sladen, on the Echinoidea of the Mergui Archipelago; (3) Mr. W. P. Sladen, on the Asteroidea of the Mergui Archipelago; (4) Mr. W. Bolus on South African Orchideæ; (5) Mr. R. A. Rolfe, "A morphological and systematic revision of Apostasiæ."

This meeting terminates the session 1887-88.

### ZOOLOGICAL SOCIETY OF LONDON.

May 15, 1888. - Dr. A. GÜNTHER, F.R.S., Vice-President, in the chair.

The Secretary read a report on the additions that had been made to the Society's Menagerie during the month of April, 1888; and called special attention to two Rock-hopper Penguins from the Auckland Islands, presented by Capt. Sutcliff, R.M.S.S. 'Aorangi,' 19th April; also to two Indian Hill-Foxes, and to a fine example of the Spotted Hawk-Eagle, Spizaëtus nipalensis, presented by Col. Alex. A. Kinloch, and received 20th April.

A communication was read from Mr. George A. Treadwell, containing an account of a fatal case of poisoning from the bite of the Gila Monster, Heloderma suspectum.

Mr. Boulenger exhibited the type-specimen of a singular new genus of Snakes, Azemiops fea, recently discovered by M. Fea, of the Museo Civico of Genoa, in the Kakhim Hills, Upper Burma. Mr. Boulenger proposed to refer this genus provisionally to the family Elapida.

The Secretary read a letter addressed to him by Mr. E. C. Cotes, Entomological Department, Indian Museum, Calcutta, respecting the insect-pests of India, and requesting the assistance of entomologists in working out the species to which they belong.

Mr. H. Seebohm exhibited and made remarks on a series of specimens of Pheasants from Mongolia, Thibet, and China, including examples of the two species discovered by Col. Prjevalski, *Phasianus strauchi* and *P. vlangali*.

Prof. F. Jeffrey Bell exhibited and made remarks on three specimens of a large Pennatulid, Funiculina quadrangularis, obtained by Mr. John Murray on the west coast of Scotland. They showed very clearly the differences between examples of this species of different ages.

Mr. R. Bowdler Sharpe gave an account of a third collection of birds made by Mr L. Wray in the main range of mountains of the Malay Peninsula, Perak. The present paper contained descriptions of ten species new to Science, amongst which was a new *Pericrocotus*, proposed to be called *P. wrayi*.

Prof. F. Jeffrey Bell read the descriptions of four new species of Ophiuroids from various localities.

Mr. F. E. Beddard read a paper containing remarks on certain points in the visceral anatomy of *Balaniceps rex* bearing upon its affinities, which he considered to be with the *Ardeida* rather than with the *Ciconiida*.

Mr. G. B. Sowerby gave the description of a gigantic new species of Mollusk of the genus Aspergillum from Japan, which he proposed to name A. giganteum.

June 5, 1888.—Dr. EDWARD HAMILTON, Vice-President, in the chair.

The Secretary read a report on the additions that had been made to

the Society's Menagerie during the month of May.

Mr. H. E. Dresser exhibited a specimen of a new Shrike from the Transcaspian district of Central Asia, which he proposed to call *Lanius raddei*, after Dr. Radde, of Tiflis, its discoverer,

Mr. Sclater, on the part of Mr. F. M. Campbell, exhibited a pair of Pallas's Sand Grouse, Syrrhaptes paradoxus, shot in Hertfordshire, in May last, and made remarks on the recent immigration of this Central Asiatic bird into Western Europe.

The Secretary exhibited, on behalf of Prof. R. Collett, a nest, eggs, and two young ones in down of the Ivory Gull, *Larus eburneus*, belonging to the Tromsö Museum, which had been obtained in Spitzbergen in August, 1887.

Mr. Warren communicated a paper on Lepidoptera collected by Major Yerbury in Western India in 1886-87, forming a continuation and completion of two previous papers, by Mr. A. G. Butler, on Lepidoptera collected by the same gentleman in similar localities. The present collection contained examples of over 200 species of Heterocera, of which about one-fourth were described as new. Mr. Warren remarked upon the abnormal development of separate organs, such as the antennæ and palpi, in tropical insects, as being rather specific aberrations from a generic type, than as warranting the erection of new genera.

A communication was read from Mr. Martin Jacoby, containing descriptions of some new species of Phytophagous Coleoptera from Kiukiang, China.

Mr. F. E. Beddard read some notes on the structure of a peculiar sternal gland found in *Didelphys dimidiata*.

Mr. G. A. Boulenger read a paper on the scaling of the reproduced tail in Lizards, and pointed out that the scaling of the renewed tails of Lizards may, in some cases, afford a clue to the affinities of genera or species to one another.

Mr. F. E. Beddard gave a preliminary notice of an apparently new form of Gregarine found parasitic on an earthworm of the genus *Perichata*, from New Zealand.—P. L. Sclater, *Secretary*.

## ENTOMOLOGICAL SOCIETY OF LONDON.

June 6, 1888 - Dr. D. SHARP, F.L.S., President, in the chair.

Mr. George Meyer Darcis, of 32, Central Hill, Upper Norwood, was elected a Fellow of the Society.

Mr. Pascoe brought for exhibition a book of fine plates of Mantida, drawn by Prof. Westwood, which it had been hoped would have been published by the Ray Society.

Mr. E. Saunders exhibited a species of Hemiptera, Monanthia angustata, H.-S., new to Britain, which he had captured by sweeping, near Cisbury, Worthing. The insect is rather closely allied to the common Monanthia cardui, L.

Mr. M'Lachlan exhibited a species of *Halticida*, which had been sent him by Mr. D. Morris, Assistant Director of the Royal Gardens, Kew, who had received them from Mr. J. H. Hart, of the Botanic Gardens, Trinidad, with a note to the effect that they had attacked young tobacco and eggplants badly in that island. Mr. Jacoby had, with some reserve, given as his opinion that it might possibly turn out to be *Epitrix fuscata*, Duv., a species which had been described from Cuba.

The Rev. H. S. Gorham exhibited a number of beetles lately captured in Brittany, including *Diachromus germanus*, L., *Onthophagus taurus*, L., *Hister sinuatus*, Ill., and other species which are exceedingly rare, or altogether wanting in Britain, and yet occur very commonly in the North of France.

Mr. Enock exhibited specimens of the Hessian Fly bred by himself, and mounted for the microscope.

Mr. White exhibited living larvæ of Endromis versicolora, and remarked that when quite young they are nearly black, owing to being very thickly spotted with that colour; the body-colour is green, and after the second change of skin the spots disappear. Mr. White also exhibited two preserved larvæ of Phorodesma smaraylaria, which he had recently taken, and made some remarks concerning the so-called "case' which this insect is said to construct from the leaves of its food-plant, Artemisia maritima. This he did not consider to be really a case, but he had discovered that the larva possessed on its segments certain secretory glands, at the apex of each of which there is a bristly hair; this appears to retain pieces of the plant, which are probably fixed firmly afterwards by means of the secreted fluid. These pieces are very irregularly distributed, and their purpose is evidently protective.

Mr. Lewis exhibited about three hundred specimens of the genera Hetarius, Er., and Eretmotus, Mars. The most remarkable of these was Hetarius acutangulus, Lewis, discovered last year by Mr. J. J. Walker near Tangier, and were recently taken by him at S. Roche, in

Spain. The names of the other species exhibited are: —Hetarius Bedeli, Lewis, H. punctulatus, Lucas, H. cosmosellus, Fairmaire, H. pluristriatus, Fairmaire, H. setulosus, Reitter, Eretmotus sociator, Fairmaire, from Algeria. Hetarius acutangulus, Lewis, H. arachnoides, Fairmaire, H. —, n. sp., Eretmotus tangerianus, Marseul, from Morocco. Hetarius hispanicus, Rosenb., H. marseuli, Brisout, Eretmotus ibericus, Brisout, from Spain. Hetarius ferrugineus, Oliv., from France.—W. W. Fowler, Hon. Sec.

# NOTICES OF NEW BOOKS.

Notes on the Birds of Herefordshire: contributed by Members of the Woolhope Club. Collected and arranged by the late Henry Graves Bull, M.D. 8vo, pp. 274. London: Hamilton, Adams & Co. Hereford: Jakeman & Carver.

On turning over the pages of this volume, the latest contribution to the series of county "avifaunas" which it has become the fashion now-a-days to write, we are forcibly reminded of the old adage which refers to "too many cooks," and we cannot help thinking that the reason (or, at all events, one reason) why the Editor has so completely failed in his object, is because he has tried to please too many contributors, and has accepted all sorts of MS., good, bad, and indifferent, and far too much poetry, also good, bad, and indifferent. An apt quotation from the works of a genuine poet, if skilfully introduced, is an embellishment to the text, but to string together a number of quotations, à propos des bottes, and to deal them out a page or two at a time (see pp. xvi—xvii, 14, 79, 82, 83, 85, 110, 111, &c.), with hardly a line of prose to relieve the monotony, is the surest way to weary the reader, and to vex the critic.

We shall endeavour to do the authors justice, however, by skipping the poetry, and by looking only at the facts which they have thrown together, not very skilfully, concerning the birds which have been met with in Herefordshire. And here we must, unfortunately, again protest, and question the wisdom of introducing a large number of species which are not known to have occurred at any time in the county, and are perhaps never likely to do so. It is true the names of the species in question are enclosed between brackets to indicate that they have no connection with the county, but this being the case, it would have been

better to have omitted them altogether, for the statements concerning them are of a purely negative character, and their introduction not only confuses the reader, but hinders him from forming a proper estimate of the strictly local fauna. If we add that throughout the volume there is a manifest lack of acquaintance with the literature of the subject, and a want of appreciation of what a county avifauna should be, we shall perhaps have advanced all that need be said in the way of adverse criticism.\*

It is much pleasanter to turn to the redeeming features of the book, and to assure our readers that, setting aside the selections from the poets, and much unprofitable verbiage, they may extract some information concerning British birds of more than local interest.

It has often been asserted that the Mistletoe Thrush derives its name from a predilection for the berries of the Mistletoe, and the statement is made (p. 3) that these berries are its "favourite food." Now if any observers be qualified to speak authoritatively on this point it should be the ornithologists of Herefordshire; for in this county, if we mistake not, the plant is as common as the bird; and yet elsewhere repeated enquiries have failed to elicit any positive evidence that the berries in question are ever touched by this bird. Is the oft-repeated statement, after all, only a scrap of "folklore" devoid of real foundation?

On the authority of the Rev. C. L. Eagles, it is stated (p. 9) that the Ring Ouzel "lives sometimes all the year round on the slopes of the Black Mountains, where he has shot them in winter, and has often seen their nests in summer." This is interesting, as it has been doubted whether this bird should be regarded as a resident (cf. 'Handbook of British Birds,' p. 12), or as a summer visitor (cf. Yarrell, 'British Birds,' 4th ed. vol. i. p. 287). Several instances in support of the former view have been noted in 'The Zoologist,' 1879, pp. 174, 203, 266, and 1886, p. 490. See also Mansel-Pleydell, 'Birds of Dorset,' p. 22.

<sup>\*</sup> The allusion to "Mr." White of Selborne (p. 23) reminds us of a letter which appeared not long since in the columns of a contemporary, signed by a Mr. Fox, who desired to make it known that he was not the author of a statement quoted in the previous number as having been furnished by a Mr. Fox to Gilbert White, "neither had he the pleasure of knowing Mr. White"!

The Nightingale is said to be not at all abundant in Herefordshire (p. 15), and almost confined to the southern half of the county; but its numbers vary very much in different seasons. The Rev. Clement Ley writes:—"I have known them in certain years so numerous at Sellack, near Ross, as to be positively troublesome by the nocturnal disturbance they cause. In other seasons they have been almost entirely absent."

A curious site for Sand Martins' nests is mentioned at p. 45, a number of these birds having "recently established themselves in the mound at the back of the rifle-butts, Warham."

The Cirl Bunting is stated (p. 59) to be not an uncommon bird in Herefordshire.

The Black Woodpecker, *Picus martius*, comes again to the fore (p. 91), and the Editor states that there can be no doubt of its having been observed on several occasions in Herefordshire. Capt. Mayne Reid is stated to have seen two specimens in the woods near his residence at Frogmore, Ross, and although, as every one knows, this well-known author was much given to romancing, he may on the occasion referred to have been perfectly serious.

The Rev. Clement Ley saw a Great Black Woodpecker at Ruckhall Wood, Eaton Bishop, about the year 1874, and pointed it out to his cousin, Mr. Edward Du Buisson, who also saw it there. On writing to Mr. Ley on the subject, he replied that "he had not the least doubt about it," and that, besides this instance, he has on two or three occasions heard the note of this bird in the neighbourhood of Ross, without being able to get a sight of it. The secret of meeting with rare birds in England, he adds, is to be found in familiarising oneself with their notes in countries where they are more common. Thus, by learning the note of the Great Black Woodpecker on the Continent, he has met with this bird on several occasions in England, the last occasion being in 1876 at Mount Edgecombe, in Devonshire, where he not only heard the note, but "got a fine view of the bird." Then Mr. D. R. Chapman is stated to have seen a Great Black Woodpecker at Belmont (about a mile from where Messrs. Ley and Du Buisson had seen it, as already mentioned) in the spring of 1879. "His attention was called to it by his son, as it flew from a copse to a tree standing in open ground. To make sure of the species, he crawled along the meadow for some 60 or 70 yards, and was rewarded by a clear view of the bird."

These statements are positive enough, and we must confess that, considering the wide geographical range of this bird, which inhabits the pine-forests of Northern and Central Europe, and is found also in Spain, we see nothing at all improbable in its occasional appearance, as reported, in the British Islands.

It is not often that one is fortunate enough to witness the actual arrival of the Cuckoo here in spring. The mode of its appearance is thus described (p. 107) by the Rev. W. B. Mynors, whom, by the way, we had the pleasure of meeting last autumn on Speyside:-"While admiring the beauties of Nature about 5.45 a.m. on April 14th, my attention was arrested by a dull chattering, with a few sharp accents. After some seconds I descried a line of something, high as the eye could reach, about the size of Wagtails, moving from S.E. to N.W. equidistant, probably from 20 to 40 yards apart. This was an arrival of Cuckoos. I believe I saw the end of the straight line of birds, probably by no means the beginning of it. While carefully watching them, I saw about four or five leave the line, and descend with a clumsy zigzag movement till near the earth; two or three certainly remained, one or two re-ascended." Thus it appears that Cuckoos migrate in company, and travel at a good height.

In Herefordshire, as in other counties at the present day, ornithologists have to deplore the gradual extermination of all the larger birds of prey. Kites, Buzzards, Harriers, Peregrines, are all getting scarcer every year; even the poor Kestrel and the useful Owl do not escape persecution. We often wonder why country gentlemen who are fond of shooting do not educate their gamekeepers more by imparting to them a little useful natural history when opportunity occurs, as it must frequently do in the course of their rambles. Some of our friends have adopted this course with the best results. Keepers, who were never happy unless letting off their guns at something, have learnt to take a pleasure in seeing things live, in observing the movements and habits of wild creatures, and in reporting their presence to their masters. Atthough be well if others were to follow their example. 6 DE88